

## **IN THE DRAWINGS**

We enclose herewith **twelve (12)** sheets of formal drawings in the above-captioned matter. It is believed that the enclosed drawings comport, in all respects, with the requirements of the Office, and acceptance of these drawings is respectfully solicited.

## **REMARKS**

### **I. Overview**

In the Official Action, the Examiner objected to the drawings, allowed some of the claims of the application, indicated that other claims were allowable, and rejected others of the claims.

With this Response, the Applicant has submitted new drawings; accepted the allowance of one (1) claim; amended an objected-to claim, to place it in independent form and therefore make it allowable; has amended other claims to more clearly distinguish the amended claims from the prior art; has added new claims that are believed to be allowable; and has left other claims untouched.

The Applicant has also discussed the prior art and set forth those reasons why he believes that his invention is patentably distinguishable from the prior art.

### **II. The Drawings**

With this Response, the Applicant has submitted twelve (12) sheets of formal drawings. These drawings are believed to comply in all respects with the drawing requirement set forth in the Code of Federal Regulations and the MPEP. As required by the Rules, each of these sheets of formal drawings has been labeled as a "Replacement Sheet". It is believed that these drawings overcome the Examiner's objections, and place these drawings in condition for acceptance. Acceptance of the drawings is therefore respectfully requested.

### **III. Allowed and Objected to Claims**

In the Official Action, the Examiner indicated that Claim 20 was allowable. The Examiner is thanked for this notice of the allowability of Claim 20. In this Response, Claim 20 remains unchanged.

Additionally, the Examiner indicated that Claims 15 and 17-19 were objected to but would be allowable if re-written in independent form. With this Response, the Applicant has amended claim 15 to place it in independent form. In so doing, the Applicant inserted all of the material limitations of the base claim, and any intervening claims which, together, comprise Claim 15.

At this juncture, the Applicant declines to place Claims 17-19 in independent form.

### **IV. Affirmation of Election**

In a telephone conversation between the Examiner Sang-Wook On, and the undersigned attorney for the Applicant on 20 June 2006, a provisional election was made without traverse to prosecute the invention of Group I, Claims 1-20. With this Response, the Applicant hereby affirms the election, and has cancelled Claims 21-23. However, the Applicant reserves the right to reinstate these claims, or to re-file these claims in a divisional, or other later application.

### **V. Claims Rejections**

#### *A. Brief Description of the Applicant's invention*

The Applicant's invention relates to a hobbyist-useable apparatus for fabricating decoratively-shaped writing instruments, such as pens, having a casing. In one embodiment, the apparatus includes a heater unit that comprises a heat source, and a heat compartment. The heat

compartment has an opening for inserting and removing the casing. The heat source provides heat to the heating compartment. The apparatus also includes a shaper unit that comprises a platform having an elongated slot. An exterior mold assembly is attachable to the platform and is manually moveable by the user in the elongated slot. An exterior shaping surface is coupled to the exterior mold assembly. An interior molding insert has an interior shaping surface. The interior molding surface is attachable to the platform such that the movement of the exterior mold assembly in the elongated slot moves the exterior shaping surface towards and away from the interior shaping surface.

When the casing is heated in the heating compartment, the casing is then placed on the platform, and is compressed between the interior shaping surface and the exterior shaping surface by movement of the exterior mold assembly in the elongated slot. The casing is then allowed to cool.

One aspect of the present invention is that it can comprise a hobbyist-useable apparatus. A hobbyist-useable device differs significantly from a device of the type that is designed for use in a manufacturing facility.

The use of the Applicant's device in a hobbyist-useable setting imposes significant engineering challenges to the invention that are not found in industrial-type devices. One significant engineering challenge that arises with a hobbyist-useable device is product safety.

In order to form the writing instrument, the casing is heated to a point where it reaches a temperature where it can be easily molded and shaped. This heating requires a heat source to heat the casing, and produces a warm or hot casing. In order to prevent the user from burning himself on the heated casing, the device must be designed to insulate the heating element from the user, in a manner that significantly reduces the likelihood that the user will be able to

encounter the heating element directly and therefore burn himself.

Another challenge arises due to the cost constraints. In order to become a successful product, a design must be chosen that is inexpensive enough to produce so that it can be sold at a reasonable price. These economic constraints are not as prevalent when designing an industrial device, for with most industrial type manufacturing devices, it is more important that the device be durable, rather than inexpensive, since economies in a manufacturing environment are usually achieved through achieving long life and durability of the manufacturing components, rather than saving money on the initial purchase price, as enhanced durability will often result in a lower cost-per-part-produced price than a device that is constructed less robustly.

*B. Rejection of the Claims*

In the Official Action, the Examiner rejected Claims 1-3, 10-14 and 16 under Section 102(b) as being anticipated by Johnston. The Examiner also rejected Claims 4-9 under Section 103 as being unpatentable over Johnson in view of Rafferty. As set forth in more detail below, the Applicant submits that his amended claims are not disclosed or suggested by either Rafferty, or the combination of Rafferty and Johnston. The Rafferty and Johnston references differ too greatly from the Applicant's invention to make them useable, either singly, or in combination to anticipate the Applicant's claimed invention or render it obvious.

*C. Description of Prior Art*

1. **Johnston, U.S. Patent No. 2, 696,858** relates to a device for bending rattan bars. The device disclosed by Johnston appears to be designed primarily for use in a factory-type setting. For example, at Col. 1, lines 15-25, Johnston states "my invention relates to rattan

forming presses... and its objects are to dispense with the highly skilled, manual labor usually required for the bending of the [steamed bars of rattan] ... and more efficiently and expeditiously to accomplish said bending by less skilled labor through the exercise of novel mechanical means...”.

It is first important to note that Johnston relates to a rattan forming device. The rattan that Johnston forms is very different than the plastic casing that Applicant forms into a writing instrument. In order to make rattan formable, one employs steam, rather than heat alone, as the moisture from the steam is probably as important, if not more important, than the heat in making rattan formable.

Johnston’s device includes a table 6, on which tracks 10, 11, 12 and 13 exist that are arrayed in a parallel array stretching generally from one end of the table 6 to the other end of the table. Mounted upon the tracks are a pair of moveable formers 15 and 16, and a fixed former 14. The fixed former 14 is an exterior former that Johnston describes as being “firmly mounted upon the end portion of the table top”. (Col. 2, lines 37-38). In order to move the moveable formers 15 and 16, Johnston employs a hydraulic ram 17. To operate the ram, Johnston employs a motor 22, pump 23, and fluid tank 29, along with customary hose or conduit connections. (Col. 2, lines 59-77.)

Several additional differences exist between the Applicant’s invention and the device disclosed in Johnston. These differences will be discussed in more detail with reference to the particular claims.

2. **Rafferty, U.S. Patent No. 6,346,211** relates to a method and apparatus for bending a thermoplastic tube. Rafferty employs a heating unit that comprises a rectangular block 6 that is split into two parts 6a, 6b. Each part 6a, 6b is made of aluminum, and include a semi-

circular channel of slightly larger radius than a tube. Preferably, the blocks are made of aluminum because of its thermo-conductivity. The upper block part 6a of the block 6 is moveable relative to the lower part 6b. The tube 1 is supported within the channel by a pair of insulated supports 11, 12, that are spaced from each other each and of the block 6. Insulated supports 11, 12 give the annular clearance space 10 when the block 6 is closed. One can vary the length of the channel 7 by selecting the appropriate block 6 from a set of block 6 of different length.

Rafferty, like Johnston is designed primarily for an industrial application, and would not work well with the hobbyist-useable apparatus of the present invention.

For example, Rafferty's heater block parts 6a, 6b are made of aluminum. No provision is made in Rafferty for providing an insulation for the blocks. As such, the use of Rafferty's blocks in connection with a hobbyist-useable apparatus would undoubtedly result in a potentially dangerous situation, since the heat from the blocks would likely burn the user, especially when that user is an unskilled hobbyist, or child.

Further, the use of Rafferty's different sets of blocks to accommodate different lengths of tube makes the device poorly suited for a hobbyist use, as it requires the manufacturer to provide several sets of blocks, rather than the unitary heater of the present invention. This multi-set of blocks would likely drive up the cost of the product, thus impairing the affordability and saleability of the product.

There is no disclosure or suggestion of a gauge for use with the blocks, as a gauge is not necessary with Rafferty, since one varies the blocks.

*D. Discussion of Claim Differences*

The Claims, as amended, patentably distinguish the Applicant's invention over the art of record.

Claim 1 has been amended to now recite that the claimed invention is a "hobbyist-useable" apparatus that is used for fabricating writing instruments having plastic casings. Additionally, Claim 1 recites that the exterior mold assembly is manually moveable by the user in an elongated slot. As discussed above, Rafferty and Johnston do not disclose or suggest hobbyist-useable devices. Further, neither Rafferty or Johnston disclose or suggest providing an exterior mold assembly that is manually moveable by the user.

Turning now to Claim 2, the Examiner asserts that Johnston discloses at Col. 2, lines 45-50, that an exterior shaping surface is removably attached to the exterior mold assembly. This is not the case. Although former 15 is moveable, it does not include a shaping surface that is detachable from a mold assembly. Rather, all of Johnston's molds 14, 15, and 16 appear to be one-piece molds where their shaping surfaces are formed unitarily with the remainder of the mold. If one wished to change the shape of the shaping surface in Johnston, one would need to change one or more of the molds 14, 15 or 16 in its entirety .

Claim 3 goes on to further recite that there exists a plurality of exterior mold assemblies, each of which includes an exterior shaping surface that is removably attached to the mold assemblies. As Johnston discloses no shaping surfaces that are removable from his mold assembly, he cannot, as a matter of logic, disclose or suggest providing a plurality of shaping surfaces that are removable from a plurality of exterior mold assemblies. Although one conceivably could change out Johnston's mold to make a bent rattan bar having a different shape, one could only do so by changing out one or more of the entire mold assembly, and not the



shaping surface.

The Examiner further goes on to reject Claims 10-14 over Johnston. In support of her rejection of Claim 10, the Examiner states that Johnston at Fig. 2, and Col. 2, lines 50-58 discloses a mold receiving well having an interior mold insert attached to the base, wherein the base is sized and shaped to fit into the mold receiving well.

Johnston discloses no such thing. Johnston's interior mold 16 is a moveable mold, as opposed to the Applicant's fixed mold. The Applicant's mold sits in a base to maintain it in a fixed position on the platform. By contrast, Johnston's interior mold is moveable, and hence, does not sit in a fixed position.

More importantly, Johnston's interior mold 16 does not sit in any base. Nor does Col. 2, lines 50-58 of Johnston suggest otherwise. Rather, Johnston discloses a mold that runs on tracks, rather than being fitted into a base. As Johnston's interior mold contains no base, it cannot disclose or suggest the Applicant's invention.

To reject Claim 11, the Examiner asserted that Johnston discloses a device having a perimetral surface of the base that has an irregular shape, where the side walls of the mold well have a matching irregular shape.

While the Applicant will admit that Johnston does have an irregularly shaped molding *face* that matches up with a similar face of an engagable exterior mold, Johnston's interior mold is not placeable within a base. As it is not placeable within a base, it does not have a base that is capable of having an irregular shape as claimed in Applicant's Claim 11.

Applicant has converted Claim 12 into an independent claim. Applicant's Claim 12 recites, *inter alia*, that the Applicant's device comprises a hobbyist-useable apparatus for fabricating decoratively shaped writing instruments, that includes an exterior mold assembly that

includes a lever arm portion having a lever arm, with the lever arm being manually moveable between a raised position wherein the exterior shaping surface is moved away from the interior shaping surface, and a lowered position wherein the exterior shaping surface is moved towards the interior shaping surface.

This feature is neither disclosed nor suggested by Johnston nor Rafferty. Johnston employs a piston and ram arrangement to move the exterior and interior molds 15, 16 together, so that they engage the fixed exterior mold 14. No levers and lever arms exist in Johnston.

Rafferty, forms his device with a series of cams through which the tube runs. Again, Rafferty discloses no levers or lever arms.

Johnston and Rafferty do not contain any levers or lever arms. Therefore, Johnston and Rafferty cannot disclose or suggest the Applicant's invention recited in Claim 12.

Claim 13 depends from Claim 12. To reject Claim 13, the Examiner asserts that Johnston, at Col. 2, lines 63-77 and Col. 3, lines 28-31 discloses the invention claimed in Applicant's Claim 13. This is not the case. In the cited section of Johnston, there is disclosed a piston in two parts 18 and 19, that are connected by universal joint 20. Part 18 is connected directly with a cylinder of the ram. As such, Johnston employs a ram and piston arrangement to move his molds into and out of engagement with each other. He does not use the lever assembly claimed by the Applicant.

Although Johnston's piston and ram arrangement no doubt work well in the industrial context within which Johnston's device is employed, and in connection with the hydraulic actuation system employed by Johnston, Johnston's ram and piston device would not work well within the hobbyist-useable environment of the present invention.

To reject Claim 14, the Examiner cites item 21a in Fig. 2 of Johnston. However, as Johnston employs no lever arm portion he cannot, by definition, disclose a rear foot member and rear pivot member that is coupled to a rear foot assembly to said non-existent lever arm portion.

Claim 16 recites that a mold holder portion has a main body and a front foot member. This is entirely absent in Johnston.

The Examiner then rejected Claims 4-9 under Section 103, as being unpatentable over Johnston and Rafferty. Claims 4-9 should be allowable if, for no other reason, than their dependency upon now-allowable Claim 1. However, even if Claim 1 as amended is not allowable, Claims 4-9 should be allowable on their own right.

As amended, Claim 4 now recites that the heating compartment comprises a unitary heating tube. As discussed above, Johnston discloses very little, if anything about the manner in which he heats his rattan. All he states is that he “steams the rattan”, but makes no description or disclosure of the vessel in which the rattan is steamed. Further, Rafferty does not disclose the use of a unitary heating tube. As discussed above, Rafferty employs a pair of blocks that are movable with respect to each other to create a cylindrical shape, that does not comprise a unitary heating tube claimed by Applicant.

For the reasons discussed above, the moveable block arrangement disclosed by Rafferty would not be well suited to a hobbyist-useable apparatus due to the safety concerns created by forcing the user to move a heated block into and out of engagement with a tube, especially an uninsulated aluminum block of the type disclosed by Rafferty.

Claims 5-7 go on to further specify the manner in which the Applicant’s heating tube is constructed, and operates. Nothing in Johnston or Rafferty discloses the use of a heating element wrapped around a heating tube as recited in Claim 5, or the use of interior insulating tape and

exterior insulating tape being wrapped around the length of the heating tube as recited in Claim 6. Rather, there is no pressing need for the insulation in Rafferty's device, due to its intended use within an industrial environment.

Further, nothing in Rafferty discloses or suggests the use of a tubular sleeve that is inserted into the interior of the heating tube, and that extends through the distal opening of the heating tube, and into which the casing can be placed. By contrast, Rafferty relies on the support appropriately positioning the tube within the channel 7 formed by his blocks 6a, 6b, and the spacing between the tube and block to prevent the tube from contacting the block 6. As such, Rafferty cannot disclose or suggest the Applicant's claimed invention, when in fact, Rafferty teaches away from the Applicant's invention.

Although the Examiner asserts that Rafferty makes it obvious to use the gauge assembly recited in Applicant's Claims 8 and 9, the Applicant disagrees. Although Rafferty contemplates the need for accommodating tubes of different size, Rafferty accommodates those tubes by employing different blocks. To operate Rafferty's device, one places the tube to be heated upon a pair of supports, that position the tube within the half channel 7 of one of the block parts 6b. The user then moves the other block half 6a into engagement with 6b to encase the tube.

This differs markedly from the Applicant's invention, wherein the user slides the casing to be heated into the heating tube. Because of the manner in which Rafferty's device is used, there is no need for a gauge, as in the Applicant's device. As such, this complete absence of any teaching or suggestion in Rafferty of the use of such a gauge assembly makes it impossible for Rafferty to either disclose or suggest the Applicant's claimed invention.

In this Response, the Applicant has also added two new claims, Claims 24 and 25. Claim 24 recites, *inter alia*, that the Applicant's hobbyist-useable apparatus includes an interior mold

insert that is attachable and fixedly positionable relative to the platform; and a first and second exterior mold that are attachable to the platform and manually moveable in first and second elongated slots. This arrangement differs significantly from Johnston, who employs a fixed exterior mold 14 and a moveable exterior mold 16 and interior mold 15. As such, Applicant's new Claim 24 can neither be disclosed nor suggested by Johnston.

Claim 25 goes on to further elaborate, and recites that the platform includes a center portion and four elongated slots that are disposed radially around the center portion of the platform and which extend generally from the center portion to the periphery portion of the platform. Claim 25 helps to recite one of the features of the Applicant's invention that makes it infinitely more adaptable to constructing a wider variety of shapes than is believed possible for the use of Johnston's device, wherein all of the slots are disposed in a parallel relation to each other.

## **VII. Conclusion**

For the reasons set forth above, neither Rafferty nor Johnston, either singly or when combined, can disclose or suggest the Applicant's invention. A plurality of patentably distinguishable features exist between the Applicant's invention and the art of record.

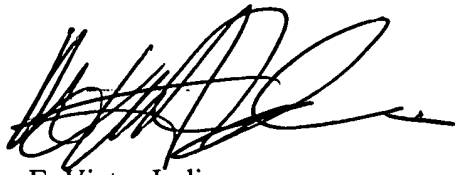
Re-examination and re-consideration culminating in the allowance of all claims is therefore respectfully requested.

If the Examiner has any questions about this Response, he is invited to telephone the Applicant's attorney at 317-822-0033.

### **VIII. Request for Extension of Time**

If necessary, Applicant requests that this Response be considered a request for an extension of time for a time appropriate for the response to be timely filed. Applicant requests that any required fees needed beyond those submitted with this Response be charged to the account of E. Victor Indiano, Deposit Account Number 50-1590.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'E. Victor Indiano', written in a cursive style.

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